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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,032	08/18/2004	Zhi-Hai Zhang	ACMP0150USA	5031
27765 7590 06/30/2008 NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116				
EXAMINER FUJITA, KATRINA R				
ART UNIT 2624		PAPER NUMBER		
NOTIFICATION DATE 06/30/2008		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/711,032

Applicant(s)

ZHANG, ZHI-HAI

Examiner

KATRINA FUJITA

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CD/CD)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Amendment

1. This Office Action is responsive to Applicant's remarks received on April 9, 2008. Claims 1-24 remain pending.

Specification

2. The previous specification objection has been withdrawn in light of Applicant's amendment.

Claim Objections

3. The previous claim objections have been withdrawn in light of Applicant's amendment.

Claim Rejections - 35 USC § 103

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5 and 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Tahara et al. (US 5,856,048), Baba et al. (US 5,729,024) and Abe et al. (US 4,149,269).

Regarding **claim 1**, Tahara et al. discloses a method for capturing ("read the information-recorded medium" at col. 23, line 3) a pattern printed on a print medium, the pattern comprising a holographic image ("diffraction grating and a hologram is formed on a printed layer" at col. 22, line 53) and the method comprising following steps:

(a) providing an image-capturing device (figure 17) comprising a light source (figure 17, numeral 44) for emitting light onto the print medium (figure 17, numeral 50) and a light-sensing component (figure 17, numeral 54) for receiving light reflected (figure 17, numeral 49) from the print medium;

(b) adjusting a disposition of the print medium ("information-recorded medium is relatively moved" at col. 23, line 34), a normal zone where a light-sensing component (figure 17, numeral 52) will receive light reflected from the holographic image of the pattern ("a part of the light that strikes upon the hologram 56" at col. 23, line 7) and a blind zone where the light-sensing component will not receive light reflected from the holographic image of the pattern ("reflected light 49 travels in the direction opposite to

that of the incident light through the composite member 43, and is diffracted toward a given direction determined by the pitch and direction of the diffraction grating" at col. 23, line 25; as shown, the only reflected light this sensor receives is light that was reflected by the substrate and then diffracted. as such, the light reflected by the holographic image is not received by this sensor); and

(c) capturing the pattern with the light source and the light-sensing component ("diffracted light 51 is received by a light receptor element 54" at col. 23, line 29).

Tahara et al. does not disclose that the print medium is disposed on a transparent platform.

Baba et al. teaches a method for capturing a pattern printed on a print medium ("original edge detecting system for detecting edges of an original paper sheet" at col. 1, line 8) wherein the print medium is disposed on a transparent plate (figure 12, numeral 3).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize the transparent plate of Baba et al. in the device of Tahara et al. to achieve a particular diffraction arrangement need to read certain information-recorded mediums.

The Tahara et al. and Baba et al. combination does not disclose that the adjusting a disposition of the print medium, the light source and the light-sensing component is done by moving the print medium with respect to the light-sensing component from a first position to a second position to change the distance between the

print medium and the light-sensing component, moving the light source from a third position to fourth position, or moving the light-sensing component from a fifth position to a sixth position and that the same light-sensing component is equivalently relocated from the normal zone to the blind zone.

Abe et al. teaches a method for capturing a pattern printed on a print medium, the pattern comprising a holographic image ("holograms 24 are formed on the sheet 13" at col. 3, line 41; "read the selected hologram" at col. 4, line 59) and the method comprising:

adjusting a disposition of the print medium, the light source and the light-sensing component by moving the print medium with respect to the light-sensing component from a first position to a second position to change the distance between the print medium and the light-sensing component, moving the light source from a third position to fourth position, or moving the light-sensing component from a fifth position to a sixth position ("move the sensor 14 to a position to read the identification portion" at col. 4, line 37) and equivalently relocating the light-sensing component (relocation resulting from subsequent hologram readings) from a normal zone where the light-sensing component will receive light reflected from the holographic image of the pattern ("move the sensor 14 vertically to scan the image 26 and thereby read the selected hologram 24" at col. 4, line 58) to a blind zone where the light-sensing component will not receive light reflected from the holographic image of the pattern ("move the sensor 14 to a position to read the identification portion" at col. 4, line 37; the identification portion does not contain the hologram image).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize the scan control unit and single sensor of Abe et al. to receive the image data of the Tahara et al. and Baba et al. combination to ensure accurate hologram readings with a single, compact image sensor.

Regarding **claim 2**, Abe et al. discloses a method wherein adjusting the disposition of the light source, the light-sensing component and the print medium is realized by relocating the light-sensing component ("move the sensor 14 to a position to read the identification portion" at col. 4, line 37).

Regarding **claim 3**, Abe et al. discloses a method wherein adjusting the disposition of the light source, the light-sensing component and the print medium is realized by relocating the light source ("scan drive unit 34 may be adapted to shift the reconstruction beam 17 relative to the sheet" at col. 5, line 37).

Regarding **claim 4**, Baba et al. discloses a method wherein adjusting the disposition of the light source, the light-sensing component and the print medium is realized by installing a transparent plate between the print medium and the image-capturing device (figure 12, numeral 3; the transparent plate inherently has transmission characteristics that affect how the light will be received by the print medium).

Regarding **claim 5**, Baba et al. discloses a method wherein the transparent plate comprises a first surface for the print medium to be placed on (the top of the plate as shown in figure 12) and a second surface disposed in parallel with the first surface (the bottom of the plate as shown in figure 12).

Regarding **claim 7**, Tahara et al. discloses a device for implementing the method of claim 1 (figure 17).

Regarding **claim 8**, the Tahara et al., Baba et al. and Abe et al. combination discloses the elements of claim 1 as described in the 103 rejection above.

The Tahara et al., Baba et al. and Abe et al. combination does not disclose providing the image-capturing device with a logic unit for adjusting a disposition of the light source and the light-sensing component.

Baba et al. discloses a method comprising providing the image-capturing device with a logic unit (portion of figure 12 that contains the "single computer software" at col. 15, line 12) for adjusting the disposition of the light source and the light-sensing component.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize the logic unit of Baba et al. to control positioning of the components of the Tahara et al., Baba et al. and Abe et al. combination to adjust the light source and light-sensing component to accommodate for various read arrangement needs.

Regarding **claim 9**, Baba et al. discloses a method wherein the logic unit is a logic circuit (it is implied that the software is contained in a memory circuit).

Regarding **claim 10**, Baba et al. discloses a method wherein the logic unit is a program code stored in a memory device (it is implied that the software is contained in a memory circuit).

Regarding **claim 11**, the Tahara et al., Baba et al. and Abe et al. combination discloses a method wherein the light-sensing component is movable (as discussed above, the sensor is movable) and the logic unit is capable of controlling the light-sensing component to move to a predetermined position (as the hologram is placed in a predetermined position and the sensor is moved to read the identification portion, this position is predetermined).

Regarding **claim 12**, the Tahara et al., Baba et al. and Abe et al. combination discloses a method wherein the light source is movable (as discussed above, the light source is movable) and the logic unit is capable of controlling the light source to move to a predetermined position (as the hologram is placed in a predetermined position and the laser is moved to illuminate the identification portion, this position is predetermined).

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Tahara et al., Baba et al. and Abe et al. as applied to claim 4 above, and further in view of common knowledge in the art as evidenced by Yoshimura (US 4,796,963).

Regarding **claim 6**, the Tahara et al., Baba et al. and Abe et al. combination discloses the elements of claim 4 as described in the 103 rejection above.

The Tahara et al., Baba et al. and Abe et al. combination does not disclose that the transparent plate comprises a second surface oblique to the first surface.

However, it is common knowledge in the art that a transparent plate placed at an angle to a light source will have different transmission and reflection characteristics

("When the transparent plate 50 is inclined by a predetermined angle θ with respect to the axial direction of the rotary polygon mirror 52, most of the incident laser beam emitted by the laser diode unit 42 is refracted at a border between the air and the front surface of the transparent plate 50 and enters therein" Yoshimura at col. 7, line 1).

Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize a transparent plate with an angled surface in the device of the Tahara et al., Baba et al. and Abe et al. combination to achieve a particular diffraction arrangement need to read certain information-recorded mediums.

7. Claims 13-15, 17, 19-21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Tahara et al., Baba et al., Abe et al. and common knowledge in the art as evidenced by Yoshimura.

Regarding **claim 13**, Tahara et al. discloses an image-capturing device for capturing a pattern printed on a print medium ("read the information-recorded medium" at col. 23, line 3), the pattern comprising a holographic image ("diffraction grating and a hologram is formed on a printed layer" at col. 22, line 53) and the image-capturing device comprising:

a light source (figure 17, numeral 44) for emitting light onto the print medium (figure 17, numeral 50);

a light-sensing component (figure 17, numeral 54) for receiving light reflected (figure 17, numeral 49) from the print medium; and

changing a disposition of the print medium, the light source and the light-sensing component ("light source 44, optical system 45, receptor element 54 and the mechanism (not shown) for moving the information-recorded medium 50 are relatively arranged in such a way that it conforms to the angle and direction of diffraction of the diffracted light" at col. 23, line 47), a normal zone where a light-sensing component (figure 17, numeral 52) will receive light reflected from the holographic image of the pattern ("a part of the light that strikes upon the hologram 56" at col. 23, line 7) and a blind zone where the light-sensing component will not receive light reflected from the holographic image of the pattern ("reflected light 49 travels in the direction opposite to that of the incident light through the composite member 43, and is diffracted toward a given direction determined by the pitch and direction of the diffraction grating" at col. 23, line 25; as shown, the only reflected light this sensor receives is light that was reflected by the substrate and then diffracted. as such, the light reflected by the holographic image is not received by this sensor).

Tahara et al. does not disclose a transparent plate for the print medium to be placed on.

Baba et al. teaches a image-capturing device for capturing a pattern printed on a print medium ("original edge detecting system for detecting edges of an original paper sheet' at col. 1, line 8) comprising a transparent plate for the print medium to be placed on (figure 12, numeral 3; the transparent plate inherently has transmission characteristics that affect how the light will be received by the print medium).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize the transparent plate of Baba et al. in the device of Tahara et al. to achieve a particular diffraction arrangement need to read certain information-recorded mediums.

The Tahara et al. and Baba et al. combination does not disclose that the same light-sensing component is equivalently relocated from the normal zone to the blind zone.

Abe et al. teaches a method for capturing a pattern printed on a print medium, the pattern comprising a holographic image ("holograms 24 are formed on the sheet 13" at col. 3, line 41; "read the selected hologram" at col. 4, line 59) and the method comprising:

equivalently relocating the light-sensing component (relocation resulting from subsequent hologram readings) from a normal zone where the light-sensing component will receive light reflected from the holographic image of the pattern ("move the sensor 14 vertically to scan the image 26 and thereby read the selected hologram 24" at col. 4, line 58) to a blind zone where the light-sensing component will not receive light reflected from the holographic image of the pattern ("move the sensor 14 to a position to read the identification portion" at col. 4, line 37; the identification portion does not contain the hologram image).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize the scan control unit and single sensor of Abe et al. to receive

the image data of the Tahara et al. and Baba et al. combination to ensure accurate hologram readings with a single, compact image sensor.

The Tahara et al., Baba et al. and Abe et al. combination does not disclose an adaptor installed between the transparent plate and the print medium for upwardly moving the print medium with respect to the light-sensing component from a first position to a second position.

However, it is common knowledge in the art that an adaptor, in the form of a transparent plate, placed at an angle to a light source will have different transmission and reflection characteristics ("When the transparent plate 50 is inclined by a predetermined angle θ with respect to the axial direction of the rotary polygon mirror 52, most of the incident laser beam emitted by the laser diode unit 42 is refracted at a border between the air and the front surface of the transparent plate 50 and enters therein" Yoshimura at col. 7, line 1). Furthermore, installing such an adaptor on top of the transparent plate would move the print medium upwards with respect to the light-sensing component from a first to second position.

Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize a transparent plate with an angled surface in the device of the Tahara et al., Baba et al. and Abe et al. combination to achieve a particular diffraction arrangement need to read certain information-recorded mediums.

Regarding **claim 14**, the Tahara et al., Baba et al. and Abe et al. combination discloses a method wherein the adaptor is a transparent plate (see the rejection of claim 13).

Regarding **claim 15**, Baba et al. discloses a method wherein the transparent plate for the print medium to be placed on comprises a first surface for the print medium to be placed on (the top of the plate as shown in figure 12) and a second surface disposed in parallel with the first surface (the bottom of the plate as shown in figure 12).

Regarding **claim 17**, the Tahara et al. and Baba et al. combination discloses a method wherein the transparent plate for the print medium to be placed on comprises a first surface for the print medium to be placed on and a second surface oblique to the first surface (see the 103 rejection of claim 6).

Regarding **claim 19**, Tahara et al. discloses an image-capturing device for capturing a pattern printed on a print medium ("read the information-recorded medium" at col. 23, line 3), the pattern comprising a holographic image ("diffraction grating and a hologram is formed on a printed layer" at col. 22, line 53) and the image-capturing device comprising:

- a light source (figure 17, numeral 44);

- a light-sensing component (figure 17, numeral 54); and

- adjusting a disposition of the print medium, the light source and the light-sensing component ("light source 44, optical system 45, receptor element 54 and the mechanism (not shown) for moving the information-recorded medium 50 are relatively arranged in such a way that it conforms to the angle and direction of diffraction of the

diffracted light" at col. 23, line 47), a normal zone where a light-sensing component (figure 17, numeral 52) will receive light reflected from the holographic image of the pattern ("a part of the light that strikes upon the hologram 56" at col. 23, line 7) and a blind zone where the light-sensing component will not receive light reflected from the holographic image of the pattern ("reflected light 49 travels in the direction opposite to that of the incident light through the composite member 43, and is diffracted toward a given direction determined by the pitch and direction of the diffraction grating" at col. 23, line 25; as shown, the only reflected light this sensor receives is light that was reflected by the substrate and then diffracted. as such, the light reflected by the holographic image is not received by this sensor).

Tahara et al. does not disclose a transparent plate.

Baba et al. teaches a image-capturing device for capturing a pattern printed on a print medium ("original edge detecting system for detecting edges of an original paper sheet' at col. 1, line 8) comprising a transparent plate (figure 12, numeral 3; the transparent plate inherently has transmission characteristics that affect how the light will be received by the print medium) comprising a first surface to the print medium to be placed on (the top of the plate as shown in figure 12) a second surface installed on a first side of the first surface according to a predetermined rule for contacting with the transparent plate (bottom of the plate as shown in figure 12).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize the transparent plate of Baba et al. in the device of Tahara et al.

to achieve a particular diffraction arrangement need to read certain information-recorded mediums.

The Tahara et al. and Baba et al. combination does not disclose that the same light-sensing component is equivalently relocated from the normal zone to the blind zone.

Abe et al. teaches a method for capturing a pattern printed on a print medium, the pattern comprising a holographic image ("holograms 24 are formed on the sheet 13" at col. 3, line 41; "read the selected hologram" at col. 4, line 59) and the method comprising:

equivalently relocating the light-sensing component (relocation resulting from subsequent hologram readings) from a normal zone where the light-sensing component will receive light reflected from the holographic image of the pattern ("move the sensor 14 vertically to scan the image 26 and thereby read the selected hologram 24" at col. 4, line 58) to a blind zone where the light-sensing component will not receive light reflected from the holographic image of the pattern ("move the sensor 14 to a position to read the identification portion" at col. 4, line 37; the identification portion does not contain the hologram image).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize the scan control unit and single sensor of Abe et al. to receive the image data of the Tahara et al. and Baba et al. combination to ensure accurate hologram readings with a single, compact image sensor.

The Tahara et al., Baba et al. and Abe et al. combination does not disclose an adaptor for an image-capturing device comprising a first surface for the print medium to be placed on and a second surface installed on a first side of the first surface according to a predetermined rule for contacting with the transparent plate.

However, it is common knowledge in the art that an adaptor, in the form of a transparent plate, placed at an angle to a light source will have different transmission and reflection characteristics ("When the transparent plate 50 is inclined by a predetermined angle θ with respect to the axial direction of the rotary polygon mirror 52, most of the incident laser beam emitted by the laser diode unit 42 is refracted at a border between the air and the front surface of the transparent plate 50 and enters therein" Yoshimura at col. 7, line 1). Furthermore, installing such an adaptor on top of the transparent plate would move the print medium upwards with respect to the light-sensing component from a first to second position.

Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize a transparent plate with an angled surface in the device of the Tahara et al., Baba et al. and Abe et al. combination to achieve a particular diffraction arrangement need to read certain information-recorded mediums.

Regarding **claim 20**, the the Tahara et al., Baba et al. and Abe et al. combination discloses a method wherein the adaptor is a transparent plate (see the rejection of claim 19).

Regarding **claim 21**, Baba et al. discloses a method wherein first surface (the top of the plate as shown in figure 12) is parallel with the second surface (the bottom of the plate as shown in figure 12).

Regarding **claim 23**, the the Tahara et al., Baba et al. and Abe et al. combination discloses a method wherein the transparent plate for the print medium to be placed on comprises a first surface for the print medium to be placed on and a second surface oblique to the first surface (see the 103 rejection of claim 6).

8. Claims 16, 18, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Tahara et al., Baba et al., Abe et al. and common knowledge as applied to claims 15, 17, 21 and 23 above, and further in view of common knowledge in the art as evidenced by Ando et al. (US 5,808,784).

The Tahara et al., Baba et al., Abe et al. and common knowledge combination discloses the elements of claims 15, 17, 21 and 23 as described in the 103 rejections above.

The Tahara et al., Baba et al., Abe et al. and common knowledge combination does not disclose that the transparent plate is six millimeters thick and the transparent plate has a first end three millimeters thick and a second end eight millimeters thick.

However, it is well known in the art that plates of various thickness have different transmission and reflection characteristics and that plates of three, six and eight millimeters in thickness are used for various desired optics ("The optical conductor 51 is

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a transparent plate composes of an acrylic resin, a polycarbonate resin, or the like with a thickness of 1 to 10 mm" at col. 32, line 36).

Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize a transparent plate of particular thickness in the device of the Tahara et al., Baba et al., Abe et al. and common knowledge combination to achieve a particular diffraction arrangement need to read certain information-recorded mediums.

Response to Arguments

Summary of Remarks (@ response page labeled 11): The Tahara reference does not disclose moving the light source and the light-sensing component.

Examiner's Response: This argument is moot due to the new grounds of rejection put forth above.

Summary of Remarks (@ response page labeled 14): The Yoshimura reference does not disclose "a transparent plate having a first surface and a second surface, in which a print medium is placed on the first surface, and the second surface is oblique to the first surface".

Examiner's Response: The Yoshimura reference was not relied upon for a combination, but rather as evidence of common knowledge in the art, and thus does not require the mentioned claim element in its entirety. The Yoshimura reference was utilized to show that the transmission characteristics change as the angle of the transparent plate changes, which establishes the reason for why one of ordinary skill in the art would utilize a transparent plate disposed at an angle with respect to a light source.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATRINA FUJITA whose telephone number is (571)270-1574. The examiner can normally be reached on M-Th 8-5:30pm, F 8-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on (571) 272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Katrina Fujita/
Examiner, Art Unit 2624

/Vikkram Bali/
Supervisory Patent Examiner, Art Unit 2624